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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,651

07/13/2007

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EXAMINER

HUHN, RICHARD A

ART UNIT

PAPER NUMBER

4131

MAIL DATE

DELIVERY MODE

11/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,651	<b>Applicant(s)</b> SUZUKI ET AL.	
	<b>Examiner</b> RICHARD A. HUHN	<b>Art Unit</b> 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5, 10, 15-20 and 22-25 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1, 6-9, 11-14 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04 October 2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Silyl-diamine Initiators for Anionic Polymerization of 1,3-Butadiene and Styrene, and Rubber Compositions.

2. The disclosure is objected to because of the following informalities: There are numerous spelling errors. Most of these errors have been duplicated in the claims. While the spelling errors in the claims are enumerated below, please check the remainder of the document for spelling errors.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 6, 8, 9, 11 and 13 are objected to because of the following informalities: These claims contain the following spelling errors:

- a. Claim 6: "Mooney" is misspelled as "Moony"
- b. Claim 8: "carbanion" is misspelled as "carbanoin"
- c. Claim 9: The following compound names are misspelled:

- i. 4-metlaminobenzaldehyde
  - ii. N,N-dimethylacetamide
  - iii. N,N-ethylacetamide
  - iv. 1,3-dimethyl-2-imidazoyldinone
  - v. N-methylpyrrolidone
  - vi. pheylisocyanate
  - vii. pheylthioisocyanate
- d. Claim 11: **hd**rocarbyloxysilane is misspelled
- e. Claim 13: “meaning” is misspelled as “mining”
4. Claims 1, 7, 12, and 14 are objected to because of the following informalities:
- f. Claims 1 and 7: For consistency with the formula and chemistry disclosed, “an alkaline earth metal” should be “a salt of an alkaline earth metal”.
  - g. Claim 12: The claim appears to be intended to be dependent upon another claim, as evidenced by the word “further.” As written, the claim reads extremely broadly upon a modified conjugated diene polymer, and does not require that formula (I) be a component of said polymer. Also, the claim is written as a process, although a product is being claimed. A suggested correction follows:
    - viii. The first two lines of the claim should read: “A modified conjugated diene polymer characterized by the further modifying modification of a...”.
  - h. Claim 14: The claim is written as a process, although a product is being claimed. A suggested correction follows:

- ix. The first line of the claim should read: "A polymerization initiator solution ~~characterized by adding~~ resulting from the addition of a".
  - x. The last two lines of the claim should read: "and ~~adding the~~ subsequent addition of an organic alkali metal compound or an organic alkaline earth metal compound thereto."
  - i. Claim 21: The claim is written as a process, although a product is being claimed. A suggested correction follows:
    - xi. The first line of the claim should read "A rubber composition characterized ~~by~~ as including a".
5. Appropriate correction is required.

### ***Allowable Subject Matter***

6. Claims 2-5, 10, 15-20, and 22-25 are allowed. Claims 1, 6-9, 11-14, and 21 will be in condition for allowance when the informalities above are corrected. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose or suggest the claimed conjugated diene polymer.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- j. Japanese Patent Application Publication No. JP H09-208621 A discloses similar products with related nitrogen-containing catalysts.
- k. Japanese Patent Application Publication No. JP H11-228584 A discloses silyl amines as anionic initiators.
- l. US Patent Application Publication No. 2004/0241251 A1 discloses silyl-diamines for different uses.
- m. European Patent Application Publication No. 1,980,589 A1 discloses silyl-diamines for post-polymerization modification (see pg 13, example 4).
- n. WO 2007034785 discloses silyl-diamines for post-polymerization modification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD A. HUHN whose telephone number is (571) 270-7345. The examiner can normally be reached on Monday to Friday, 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4131

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/  
Supervisory Patent Examiner  
Art Unit 4131

/R. A. H./  
Examiner, Art Unit 4131